IN THE CLAIMS

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1. (Currently Amended) A digital signal conversion method comprising the steps of:

~~a data extraction step of~~ extracting a ~~part~~ predetermined subset of orthogonal transform coefficients ~~from~~ generated after orthogonally transforming respective blocks of a digital signal of a first format ~~consisting of orthogonal transform coefficient blocks of a predetermined unit~~, thus ~~constituting~~ producing partial coefficients representing each of said respective blocks;

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~~an inverse orthogonal transform step of~~ carrying out inverse orthogonal transform processing of the extracted partial orthogonal transform coefficients ~~constituting each partial block, on a partial block basis~~;

~~a partial block connection step of~~ forming a new coupled block by connecting adjacent blocks represented by said extracted partial orthogonal transform coefficients ~~the partial blocks processed by inverse orthogonal transform, thus constituting a new block of the predetermined unit~~; and

~~an orthogonal transform step of~~ orthogonally transforming the coupled new block ~~on the block basis~~, thus generating a second digital signal of a second format consisting of ~~the~~ new orthogonal transform coefficients, representative of the new coupled block ~~of the predetermined unit~~.

2. (Currently Amended) The digital signal conversion method as claimed in claim 1, wherein the orthogonal transform is a discrete cosine transform, the digital signal of the first format is a video signal compression-coded at a predetermined fixed rate using variable-length coding, and the digital signal of the second format is a video signal compression-coded at a variable rate.

3. (Currently Amended) The digital signal conversion method as claimed in claim 1, wherein at the ~~data extraction~~ extracting step, discrete cosine transform coefficients on ~~the~~ a low-frequency side are extracted from the respective blocks of the digital signal of the first format, and the number of discrete cosine transform coefficients of a horizontal component of a luminance signal, the number of discrete cosine transform coefficients of a horizontal component of a color-different signal and the number of discrete cosine transform coefficients of a vertical component thereof are reduced.

4. (Currently Amended) The digital signal conversion method as claimed in claim 1, wherein ~~in the case where~~ one frame of the digital signal of the first format is ~~constituted by~~ comprised of two ~~frames~~ sub-frames,

at the ~~data extraction~~ extracting step, field separation for separating discrete cosine transform coefficients constituting ~~line~~ lines of an odd field of one of the ~~frame~~ sub-frames and discrete cosine transform coefficients constituting lines of an even field of one of the ~~frame~~ sub-frames, and

generating ~~a block~~ a predetermined subset consisting of the discrete cosine transform coefficients of one of ~~these~~ the fields ~~is carried out~~.

5. (Original) The digital signal conversion method as claimed in claim 1, wherein the digital signal of the first format is a compressed video signal having a resolution of 720x480 pixels and a ratio of the sampling frequency of a luminance signal to the sampling frequencies of color-difference signals equal to 4:1:1, and the digital signal of the second format is a compressed video signal having a resolution of 360x240 pixels and a ratio of the sampling frequency of a luminance signal to the sampling frequencies of color-difference signals equal to 4:2:0.

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6. (Original) The digital signal conversion method as claimed in claim 1, wherein the digital signal of the first format is a compressed video signal having a resolution of 720x480 pixels and a ratio of the sampling frequency of a luminance signal to the sampling frequencies of color-difference signals equal to 4:2:0, and the digital signal of the second format is a compressed video signal having a resolution of 360x240 pixels and a ratio of the sampling frequency of a luminance signal to the sampling frequencies of color-difference signals equal to 4:2:0.

7. (Currently Amended) The digital signal conversion method as claimed in claim 1, wherein at the ~~data extraction~~ extracting step, orthogonal transform coefficients on ~~the~~ a low-frequency side are extracted from the respective blocks of the digital signal of the first format, and the number of discrete cosine transform coefficients of a vertical component of a color-difference signal is reduced to ½.

8. (Original) The digital signal conversion method as claimed in claim 7, wherein the digital signal of the first format is a compressed video signal having a resolution of 720x480 pixels and a ratio of the sampling frequency of a luminance signal to the sampling frequencies of color-difference signals equal to 4:1:1, and the digital signal of the second format is a compressed video signal having a resolution of 720x480 pixels and a ratio of the sampling frequency of a luminance signal to the sampling frequencies of color-difference signals equal to 4:2:0.

Claims 9-13. (Canceled)

14. (Currently Amended) A digital signal conversion device comprising:

decoding means for decoding a digital signal of a first format consisting of orthogonal transform coefficients ~~of a predetermined unit~~;

inverse quantization means for inversely quantizing the decoded digital signal;

resolution conversion means for orthogonally transforming respective blocks of said inversely quantized decoded digital signal and for extracting ~~a part~~ predetermined subsets of each of the sets of the orthogonal transform coefficients ~~from adjacent blocks~~ corresponding to each block of the digital signal of a first format ~~of orthogonal transform coefficient blocks of the predetermined unit of the inversely quantized digital signal~~, thus ~~constituting~~ producing partial coefficients representing each of said respective blocks~~, and converting the resolution~~ and forming a new coupled block by connecting adjacent blocks represented by said extracted partial orthogonal transform coefficients;

quantization means for quantizing the digital signal processed by the resolution conversion means and including the coupled new block; and

coding means for coding the quantized digital signal, thus generating a second digital signal of a second format consisting of new orthogonal transform coefficients, representative of the new coupled block.

15. (Currently Amended) The digital signal conversion device as claimed in claim 14, wherein the resolution conversion means forms the new coupled block by connecting the adjacent blocks represented by ~~connects~~ the inversely orthogonally transformed partial coefficients~~, thus constituting a new block of the predetermined unit~~.

16. (Currently Amended) The digital signal conversion device as claimed in claim 14, wherein the orthogonal transform is a discrete cosine transform, the digital signal of the first format is a video signal compression-coded at a predetermined fixed rate using variable-length coding, and the digital signal of the second format is a video signal compression-coded at a variable rate.

17. (Currently Amended) The digital signal conversion device as claimed in claim 16, wherein the resolution conversion means extracts orthogonal transform coefficients on ~~the~~ a low-frequency side from the respective blocks of the digital signal of the first format, and reduces the number of discrete cosine transform coefficients to ½.

18. (Currently Amended) A digital signal conversion device comprising:

decoding means for decoding a digital signal of a first format consisting of orthogonal transform coefficients ~~coefficient blocks of a predetermined unit~~;

inverse quantization means for inversely quantizing the decoded digital signal;

resolution conversion means for orthogonally transforming respective blocks of said inversely quantized decoded digital signals and for interpolating predetermined subsets of each of the sets of the ~~respective blocks of the predetermined unit~~ orthogonal transform coefficients corresponding to each block of the ~~inversely quantized~~ digital signal of a first format with an orthogonal transform coefficient of a predetermined value, thus ~~constituting~~ producing partial coefficients representing each of said respective blocks and forming a new coupled block by connecting adjacent blocks represented by said extracted partial orthogonal transform coefficients ~~the predetermined unit, and converting the resolution~~;

quantization means for quantizing the digital signal processed by the resolution conversion means and including the coupled new block; and

coding means for coding the quantized digital signal, thus generating a second digital signal of a second format consisting of new orthogonal transform coefficients, representative of the new coupled block.

19. (Currently Amended) The digital signal conversion device as claimed in claim 18, wherein the resolution conversion means interpolates with 0 ~~the~~ a high-frequency side of the orthogonal transform coefficients of the divided respective blocks of the digital signal of the first format~~, thus constituting the respective block of the predetermined unit~~.

Claims 20-76. (Canceled)